

Complete Summary

GUIDELINE TITLE

American Cancer Society guidelines on nutrition and physical activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity.

BIBLIOGRAPHIC SOURCE(S)

Byers T, Nestle M, McTiernan A, Doyle C, Currie-Williams A, Gansler T, Thun M. American Cancer Society guidelines on nutrition and physical activity for cancer prevention: reducing the risk of cancer with healthy food choices and physical activity. CA Cancer J Clin 2002 Mar-Apr;52(2):92-119. [86 references] [PubMed](#)

COMPLETE SUMMARY CONTENT

SCOPE

METHODOLOGY - including Rating Scheme and Cost Analysis

RECOMMENDATIONS

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IMPLEMENTATION OF THE GUIDELINE

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT

CATEGORIES

IDENTIFYING INFORMATION AND AVAILABILITY

SCOPE

DISEASE/CONDITION(S)

Cancer including types of cancer in which diet and physical activity may play a role, such as bladder cancer, brain cancer, breast cancer, colorectal cancer, endometrial cancer, kidney cancer, leukemia, lung cancer, oral and esophageal cancer, ovarian cancer, pancreatic cancer, prostate cancer, and stomach cancer

GUIDELINE CATEGORY

Counseling
Prevention

CLINICAL SPECIALTY

Family Practice
Gastroenterology
Geriatrics

Internal Medicine
Nursing
Nutrition
Obstetrics and Gynecology
Oncology
Pediatrics
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Dietitians
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Nurses
Patients
Physician Assistants
Physicians
Public Health Departments

GUIDELINE OBJECTIVE(S)

To advise health care professionals and the general public about dietary and other lifestyle practices that reduce cancer risk

TARGET POPULATION

Children, adolescents, and adults seen in primary care settings in the United States

INTERVENTIONS AND PRACTICES CONSIDERED

1. Individual choices of healthful foods and physical activity:
 - Increasing vegetable and fruit intake
 - Limiting intake of red meat
 - Increasing physical activity
 - Avoiding overweight
 - Limiting alcohol intake
 - Consuming soy foods
 - Taking supplements: beta-carotene, vitamin E, vitamin C, folic acid, selenium

Note: Refer to the "Major Recommendations" field for context.

2. Community actions that facilitate healthy behaviors, including providing supportive social and physical environments

MAJOR OUTCOMES CONSIDERED

- Cancer incidence and mortality
- Quality of life

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)
Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

To review the strength of the scientific evidence, a guidelines subcommittee used a method of summarizing the evidence similar to the methods used by other expert panels. For example, the US Preventive Services Task Force judged the scientific evidence related to clinical preventive services using a system that considered both the source and strength of the evidence: from at least one controlled clinical trial, from good uncontrolled trials, from multiple good observation studies, expert opinion, and case reports. They then characterized those guidelines on a five-point grading scheme as to the strength of the guideline: "good for recommending, fair for recommending, insufficient to recommend for or against, fair for not recommending, good for not recommending." The American Institute for Cancer Research (AICR) World Cancer Research Fund project summarized the nature of the scientific evidence for nutritional factors in cancer prevention as being either "convincing, probable, possible, or insufficient."

The American Cancer Society sub-committee employed a method similar to both groups. For each issue, the committee judged the likelihood of benefit to the general public as follows:

A1. Convincing evidence for a benefit

A2. Probable benefit

A3. Possible benefit

B. Insufficient evidence to conclude benefit or risk

C. Evidence of lack of benefit

D. Evidence of harm

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The American Cancer Society recommendations for nutrition and physical activity for cancer prevention are presented below in abbreviated form. Readers should refer to the original full text guideline document to see the complete recommendations, along with the rationale and summary of the evidence.

Recommendations for Individual Choices

1. Eat a variety of healthful foods, with an emphasis on plant sources.

Eat five or more servings of a variety of vegetables and fruits each day.

- Include vegetables and fruits at every meal and for snacks.
- Eat a variety of vegetables and fruits.
- Limit French fries, snack chips, and other fried vegetable products.
- Choose 100% juice if you drink fruit or vegetable juices.

Choose whole grains in preference to processed (refined) grains and sugars.

- Choose whole grain rice, bread, pasta, and cereals.
- Limit consumption of refined carbohydrates, including pastries, sweetened cereals, soft drinks, and sugars.

Limit consumption of red meats, especially those high in fat and processed.

- Choose fish, poultry, or beans as an alternative to beef, pork, or lamb.
- When you eat meat, select lean cuts and have smaller portions.
- Prepare meat by baking, broiling, or poaching rather than by frying or charbroiling.

Choose foods that help maintain a healthful weight.

- When you eat away from home, choose foods that are low in fat, calories, and sugar, and avoid large portion sizes.
 - Eat smaller portions of high-calorie foods. Be aware that "low-fat" or "nonfat" does not mean "low-calorie," and that low-fat cakes, cookies, and similar foods are often high in calories.
 - Substitute vegetables, fruits, and other low-calorie foods for calorie-dense foods such as French fries, cheeseburgers, pizza, ice cream, doughnuts, and other sweets.
2. Adopt a physically active lifestyle.
 - Adults: engage in at least moderate activity for 30 minutes or more on five or more days of the week; 45 minutes or more of moderate-to-vigorous activity on five or more days per week may further enhance reductions in the risk of breast and colon cancer.
 - Children and adolescents: engage in at least 60 minutes per day of moderate-to-vigorous physical activity for at least five days per week.
 3. Maintain a healthful weight throughout life.
 - Balance caloric intake with physical activity.
 - Lose weight if currently overweight or obese.
 4. If you drink alcoholic beverages, limit consumption.

Recommendation for Community Action

Public, private, and community organizations should strive to create social and physical environments that support the adoption and maintenance of healthful dietary and physical activity behavior patterns.

- Increase access to healthful foods in schools, worksites, and communities.
- Provide safe, enjoyable, and accessible environments for physical activity in schools, and for transportation and recreation in communities.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

A discussion of the supporting evidence follows each recommendation in the original guideline. These recommendations are based on existing scientific evidence that relates diet and physical activity to cancer risk in human population studies as well as in laboratory animals.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Overall Benefits

There is strong scientific evidence that healthful dietary patterns, in combination with regular physical activity, can reduce cancer risk. Approximately 35 percent of cancer deaths in the United States may be avoidable through dietary modification.

Specific Benefits

Healthful Dietary Patterns

Greater consumption of vegetables, fruits, or both together has been associated in the majority of epidemiological studies with a lower risk of lung, oral, esophageal, stomach, and colon cancer. Evidence is less strong for cancers considered hormonal, such as breast and prostate. Diet can be an important factor even in cancers caused, in large part, by other factors. For instance, many studies have found a lower risk of lung cancer among those who eat more vegetables and/or fruits in their diet. Although the major factor that causes lung cancer is tobacco smoking, diet also modifies risk, both in smokers and in lifelong nonsmokers. Refer to the original guideline document for additional discussion and details.

Physical Activity

Scientific evidence indicates that physical activity may reduce the risk of several types of cancer, including cancers of the breast and colon, and can provide other important health benefits. Regular physical activity helps maintain a healthful body weight. For colon cancer, physical activity accelerates the movement of food through the intestine, thereby reducing the length of time that the bowel lining is exposed to mutagens. For breast cancer, vigorous physical activity may decrease the exposure of breast tissue to circulating estrogen. Physical activity may also

affect cancers of the colon, breast, and other sites by improving energy metabolism and reducing circulating concentrations of insulin and related growth factors. Physical activity helps to prevent adult-onset diabetes, which has been associated with increased risk of cancers of the colon, pancreas, and possibly other sites. The benefits of physical activity go far beyond reducing the risk of cancer, however, and include reducing the risk of other chronic diseases, such as heart disease, diabetes, osteoporosis, and hypertension.

POTENTIAL HARMS

- Men over 40, women over 50, and people with chronic illnesses and/or established cardiovascular risk factors should consult their physicians before beginning a vigorous physical activity program. Stretching and warm-up periods should be part of each exercise session to reduce risk of musculoskeletal injuries.
- Complicating the recommendation for alcohol and cancer risk reduction is the evidence that even moderate intake of alcoholic beverages appears to decrease the risk of coronary heart disease in both men and women.

QUALIFYING STATEMENTS

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- For many issues, the evidence is not definitive, either because studies are not yet available or current findings are inconsistent. Although the randomized, controlled trial is often considered the gold standard for scientific conclusions, such evidence is not presently available—and may never become available—for many dietary factors associated with cancer risk. Inferences about the many complex interrelationships among diet, physical activity, and cancer risk are based, for the most part, on observational studies coupled with advancing understanding of the biology of cancer.
- Although no diet can guarantee full protection against any disease, these guidelines offer the best information currently available about how diet and physical activity can reduce the risk of cancer.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2002 Mar-Apr

GUIDELINE DEVELOPER(S)

American Cancer Society - Disease Specific Society

SOURCE(S) OF FUNDING

American Cancer Society

GUIDELINE COMMITTEE

American Cancer Society 2001 Nutrition and Physical Activity Guidelines Advisory Committee

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This summary was completed by ECRI on January 13, 2004.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [American Cancer Society Web site](#).

Print copies: Available from the American Cancer Society, 1599 Clifton Rd NE, Atlanta, GA 30329; Web site: www.cancer.org.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on January 13, 2004.

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The logo for FIRSTGOV, with "FIRST" in blue and "GOV" in red, and a small red star above the "I".

